

John G. Shudy, Jr., Atty.

Klein L. Johnson, Inventor

H16-25073 US - Hermetic Chip-Scale

Package for Photonic Devices

H16 25073-US

ABSTRACT OF THE DISCLOSURE

A package having one or more integrated circuit photonic devices in a hermetically sealed enclosure. The photonic devices may be sources or detectors of light. The sealed enclosure consists of a transparent window attached to a first level housing. The transparent window contains patterned electrically conductive traces for purposes of routing electrical signals to and from semiconductor chip, which is bonded to patterned window. A second level housing is attached to the first level housing, and aligned via mechanical features incorporated with the transparent window. The second level housing provides a receptacle for a plug having light waveguides or optical fibers that are aligned with the photonic devices when inserted into the receptacle. One or more pins are inserted through the plug and the second level housing to secure the plug in the receptacle to the hermetically sealed photonic devices, such as VCSEL's on an integrated circuit semiconductor.

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